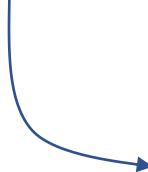
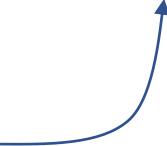
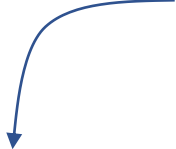
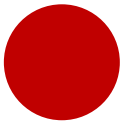
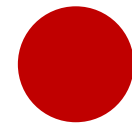


Take Off
-The camera is on and is
searching for a red circle.

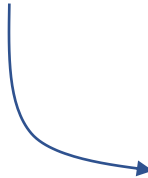
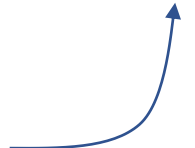
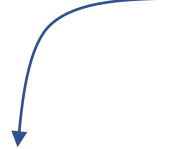
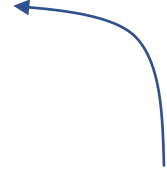


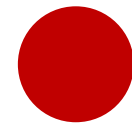
First Tour



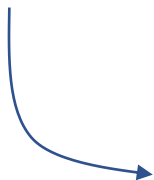
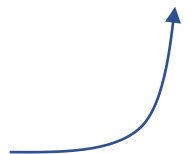
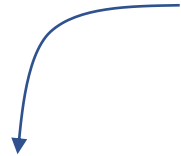
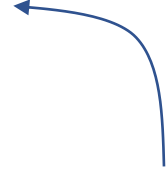


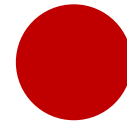
First Tour





First Tour





When the circle is detected in the first tour, the camera is closed because there is no need to use it anymore.

Also, the distance needed to release the balls is determined by using the current altitude, latitude, longitude and speed values of the UAV.

First Tour



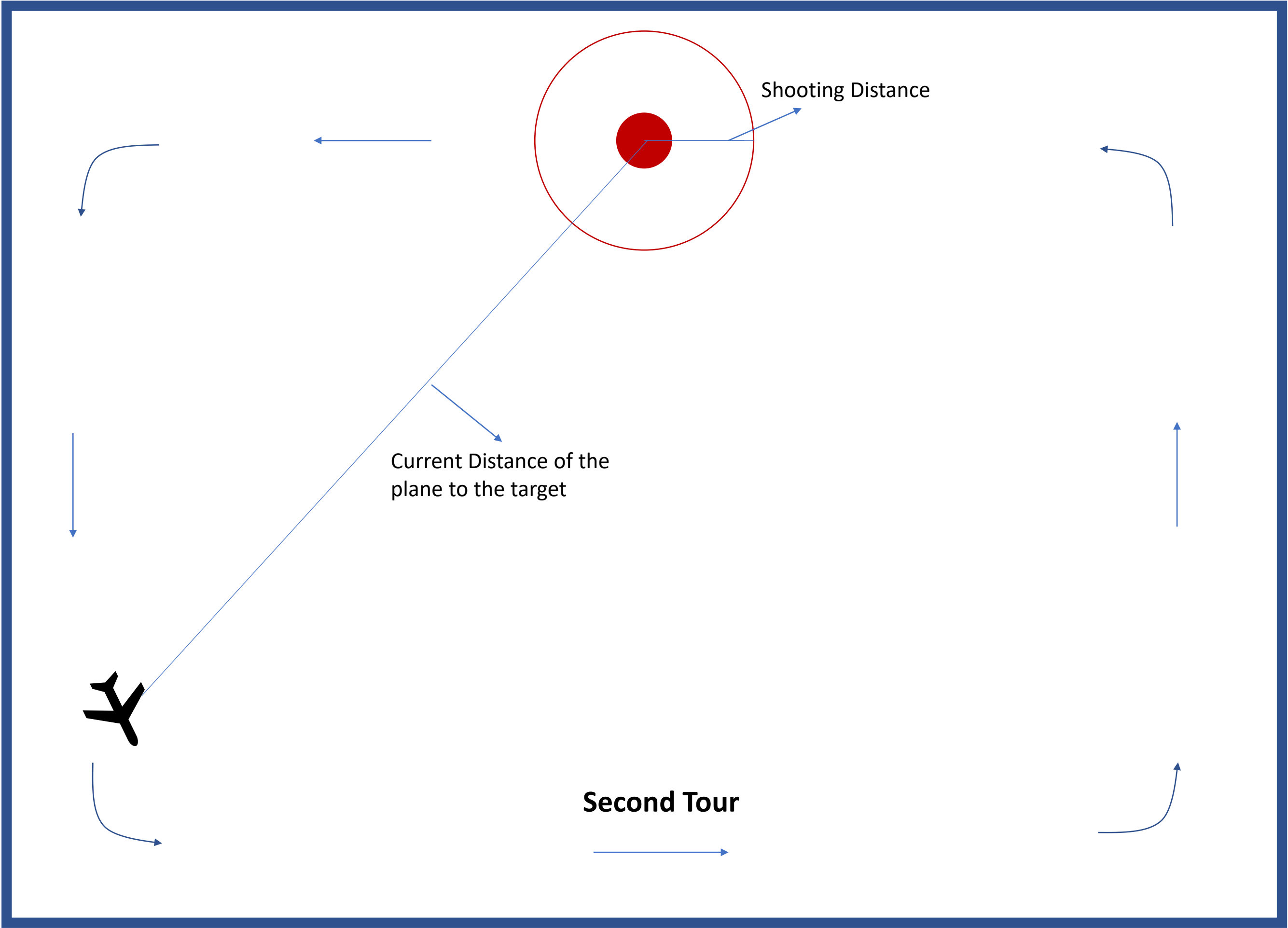
Small blue point represents the point the balls must be released to hit the target.

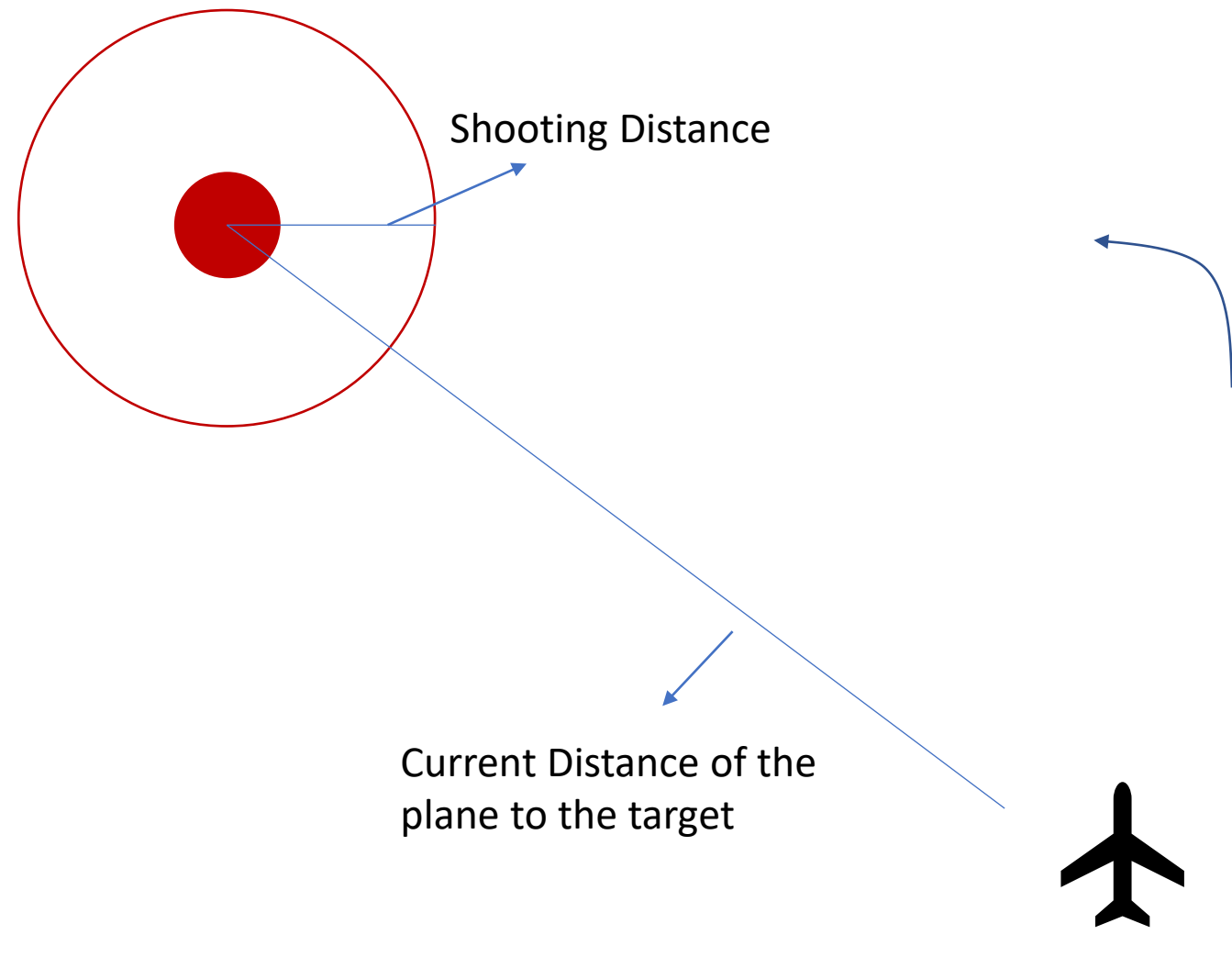
But, for convenience, we do not try to reach the blue point because it may be hard for UAV to fly through just this small area.

Instead, we release the balls when we **become closer to the target than the shooting distance.**

In other words, we create an imaginary circle.

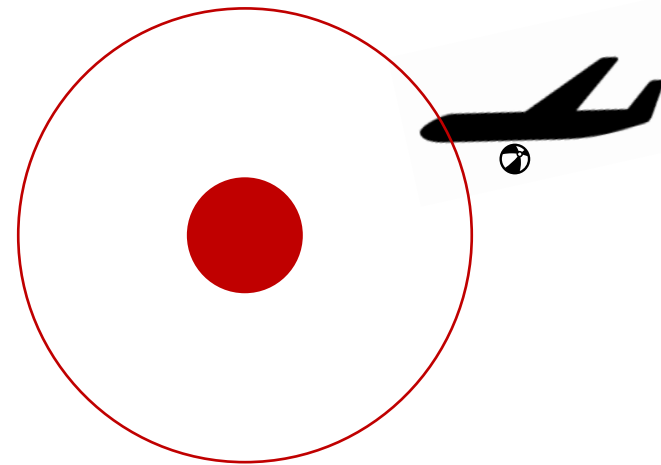
Second Tour





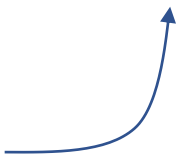
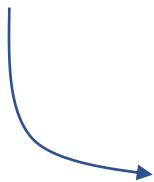
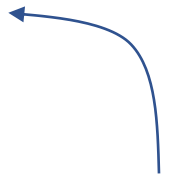
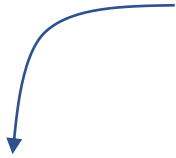
Second Tour



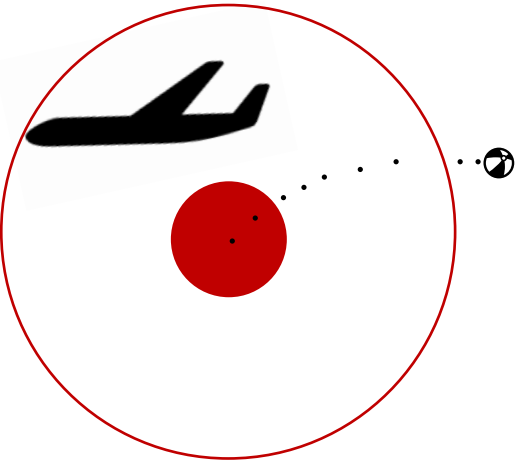


When $\text{CurrentDistanceToTarget} < \text{Shooting Distance}$,
We shoot.

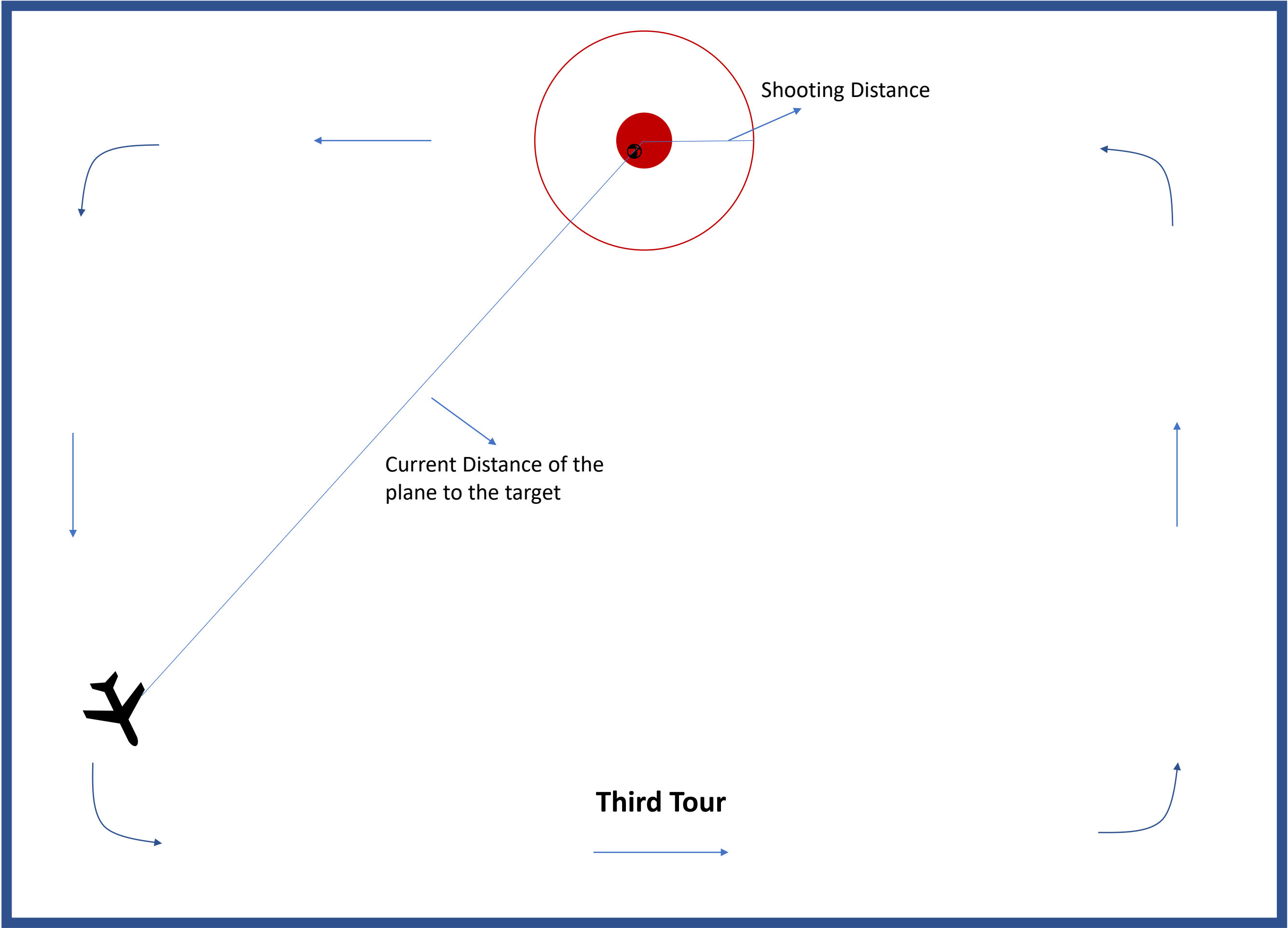
Second Tour

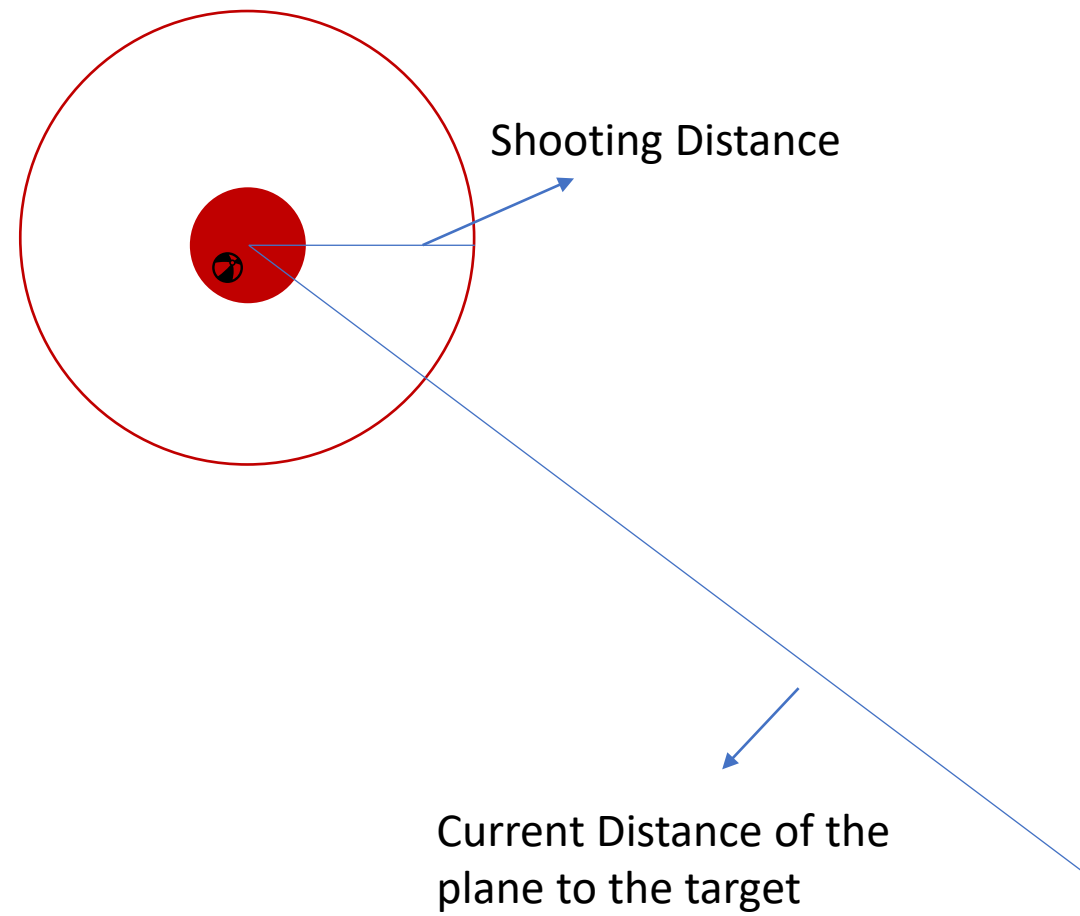


After first shooting, we stop
checking the gps values until we go
out from the range.

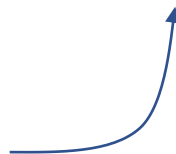
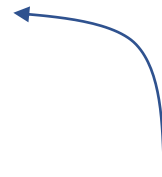
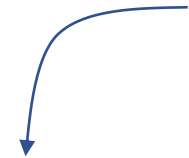


Second Tour

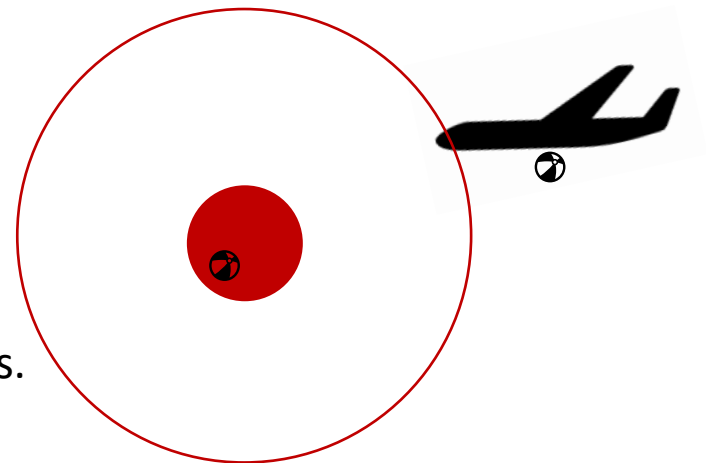




Third Tour

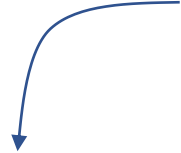
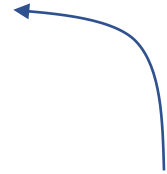
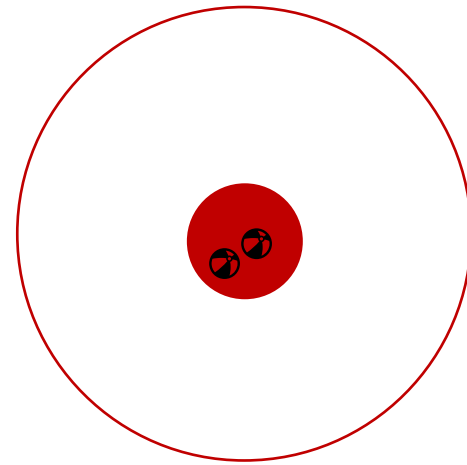


Second shoot, program terminates.



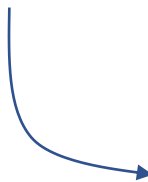
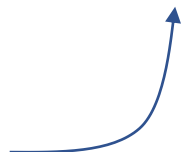
Third Tour

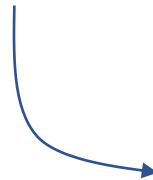
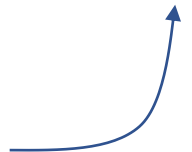
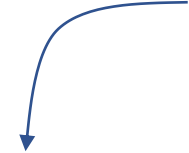
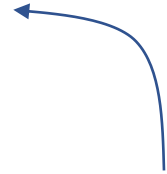
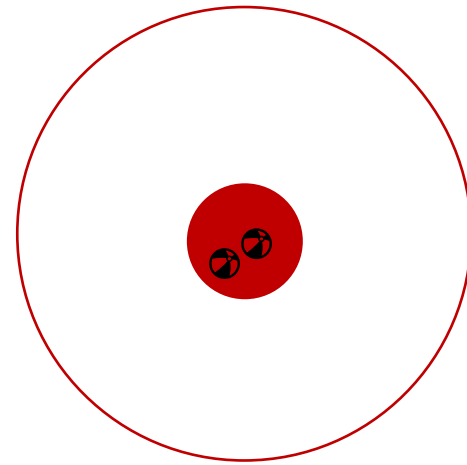




Landing

Third Tour





Third Tour

